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PATENT APPLICATION
ATTORNEY DOCKET NO. 200209554-1

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Boyd

Serial No.: 09/955,457
Filing Date: 3/25/2003

Examiner: Akm E. Ullah
Group Art Unit: 2874

Title: Scanner transparent media adapter using fiber optic face plate

THE ASSISTANT COMMISSIONER OF PATENTS
Washington, D.C. 20231

BRIEF ON APPEAL

INTRODUCTION

Pursuant to the provisions of 37 CFR § 1.191 *et seq.*, applicants hereby appeal to the Board of Patent Appeals and Interferences from the examiner's rejection dated 10/26/2005. The claims in question have been finally rejected. This brief on appeal is accompanied by the requisite fee (37 CFR 1.192(a) and 1.17(f)).

REAL PARTY IN INTEREST

The entire interest in the present application has been assigned to Hewlett-Packard Development Company, L.P., as recorded at Reel 013815, Frame 0131.

RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

STATUS OF CLAIMS

Claims 1-22 are pending in the application.

Claims 11-21 stand allowed.

Claims 1-10 and 22 stand finally rejected, and are the subject of this appeal.

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Serial No. 10/397,812

STATUS OF AMENDMENTS

No amendments have been filed after the final rejection mailed 10/26/2005.

SUMMARY OF CLAIMED SUBJECT MATTER

Claim 1 is directed to a transparent media adapter for a scanner, which is described in the specification at least at page 4 lines 20 through page 5 line 6, and in Figure 5. The transparent media adapter comprises a fiber optic face plate (701) receiving light (106) passing through a transmissive original (101) that is in substantial contact with an entrance face (504) of the fiber optic face plate (701).

Claim 22 is directed to a transparent media adapter for a scanner, comprising means for holding a transmissive original (101) in substantial contact with an entrance face (504) of a fiber optic face plate (701), and means for directing light (106) through the transmissive original (101) and into the fiber optic face plate (701).

GROUND S OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1-10 and 22 are unpatentable under 35 U.S.C. § 103(a) over Ikafuji et al. (European Patent Specification EP 0 559 433 B1).

ARGUMENT

REJECTION OF CLAIMS 1-10 AND 22 UNDER 35 U.S.C. § 103(a)

The examiner has rejected claims 1-10 and 22 as being unpatentable under 35 U.S.C. § 103(a) over Ikafuji et al. (European Patent Specification EP 0 559 433 B1), hereafter Ikafuji. Applicant respectfully submits that the rejection is improper because the examiner has not made out a *prima facie* case of obviousness.

A. Applicable law

"To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of the ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or

suggest all the claim limitations." MPEP 2143.

"If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." MPEP 2143.01, citing *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

"If an independent claim is nonobvious under 35 U.S.C. 103, then any claim dependent therefrom is nonobvious." MPEP 2143.03, citing *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

B. Claim 1

The examiner's *prima facie* case of obviousness with regard to claim 1 is deficient for at least two reasons: i) Ikafuji does not teach or suggest all of the elements of claim 1, and ii) there is no motivation to modify Ikafuji to arrive at applicant's invention. Either of these reasons is sufficient to overcome the examiner's rejection.

i) Ikafuji does not teach or suggest all of the elements of claim 1.

Claim 1 recites in part a scanner transparent media adapter, comprising a fiber optic face plate, the fiber optic face plate receiving light passing through a transmissive original that is in substantial contact with an entrance face of the fiber optic face plate. By contrast, Ikafuji describes a "flaw detection system" wherein a "traveling light-transmitting plate material" is illuminated with a "beam spot", and wherein light is received by a "receptor... having an optical-fiber array". (Ikafuji column 2 lines 25-34). Figure 1 of Ikafuji clearly shows the light-transmitting plate material (10) spaced apart from the light receptor (32). Assuming *arguendo* that Ikafuji's receptor includes a fiber optic face plate (which applicant does not admit), Ikafuji certainly does not show or suggest that its light-transmitting plate material is or may be in substantial contact with an entrance face of the fiber optic face plate as is recited in Applicant's claim 1.

ii) There is no motivation to modify Ikafuji to arrive at applicant's invention.

While the examiner's reasoning for the rejection is somewhat unclear, the examiner does state that it "would have been an obvious matter of design choice to a fiber optic face plate receiving light passing through a transmissive original that is in substantial contact with

an entrance face of the fiber optic face plate, since it has been held that rearranging parts of an invention involves only routine skill in the art." (Paper 10/24/05 page 5). Applicant will assume that the examiner is asserting that it would have been obvious to modify the system of Ikafuji by placing Ikafuji's light-transmitting plate material in substantial contact with the light receptor, and that this modification would be obvious because it is simply "rearranging parts of an invention". Applicant emphatically disagrees.

Placing Ikafuji's light-transmitting plate material in substantial contact with the light receptor would not be a simple rearrangement, because the separation of the two is necessary to the operation of the system of Ikafuji. "If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." MPEP 2143.01, citing *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Paraphrasing, there is no motivation to do that which won't work. In the system of Ikafuji, the light transmitting plate travels. That is, it moves past the light receptor. Placing the plate in contact with the receptor would render the device unsatisfactory for its intended purpose because friction between the plate and the receptor would be detrimental to both. See, for example, U.S. Patent 6,384,896 to Tatsuduki, which discusses, at column 4 lines 14-26, the problem of damage to both a moving transmissive medium and optical fibers near the moving medium (and proposes a solution not relevant here).

It cannot be obvious to place Ikafuji's light-transmitting plate material and receptor in substantial contact. Ikafuji does not teach or suggest this element of applicant's claim 1, and there is no motivation to modify the system of Ikafuji to include this claim element. The examiner's *prima facie* case therefore fails.

C. Claims 2-10

Applicant's claims 2-10 depend from claim 1 and add further limitations, and are therefore also not obvious over Ikafuji.

i. Claim 4

With particular regard to Applicant's claim 4, claim 4 recites in part a light source that emanates substantially uniform diffuse light. The examiner admits that Ikafuji "does not teach the light source emanates substantially uniform diffuse light." (Paper 10/24/05

paragraph 10). However the examiner asserts that “[o]ne of ordinary skill in the art would have found it obvious to use such a system with any desired light source, since the reference does not mention that it must be utilized with specific light source, including the scanner & adapter system, since such uniform diffuse light are well known and commonly used in the art and it appears that detection system disclosed by Masaharu [Ikafuji] would function equally well regardless of the fiber optic face plate transmits an image of the transmissive original from an entrance face to an exit face.” (Paper 10/24/05 paragraph 11). Again, the examiner’s reasoning is unclear. Applicant will assume that the examiner is asserting that it would have been obvious, in the system of Ikafuji, to use a light source that emanates substantially uniform diffuse light because Ikafuji does not expressly exclude the use of such a light source, because such light sources are common in the art, and because the system of Ikafuji would function equally well with such a light source as with the laser that is actually disclosed by Ikafuji. Applicant again emphatically disagrees.

The system of Ikafuji is intended to detect flaws in light-transmitting material. (Ikafuji column 1 lines 16-23). These flaws are as small as 0.1 – 0.2 mm in width. (Ikafuji column 1 line 29). The system projects a laser through the light-transmitting material, such that the beam spot at the material is 1 – 3 mm in diameter. (Ikafuji column 3 line 46). Flaws in the material are detected when the light transmitted through the material is changed by the flaw. (Ikafuji column 4 lines 27-58). Clearly, the system of Ikafuji requires a light source that produces a beam small enough that a very small flaw in the light-transmitting material affects the beam in a detectable manner. A light source that emanates substantially uniform diffuse light does not produce a single beam suitable for flaw detection. The system of Ikafuji would not work with a diffuse light source. It is well known to use a diffuse light source rather than a collimated light source in optical equipment specifically for the purpose of *concealing* flaws in transmissive material. See, for example, U.S. Patent 4,396,278 to Brockwell, et al., which describes a photograph enlarger having a similar arrangement to the system of Ikafuji, and which states that “[i]t is already known to hide scratches on film negative by the use of large diffuse light sources.” (Patent 4,396,278, column 1 lines 26-27).

Again, the modification to the system of Ikafuji that the examiner asserts is obvious would render the system unsuitable for its intended purpose. There is therefore no motivation to make the modification, and Ikafuji cannot support a rejection of Applicant’s claim 4. Claim 4 is therefore not obvious over Ikafuji for this additional reason.

ii. Claim 6

With particular regard to Applicant's claim 6, claim 6 depends from claim 1 and further recites in part an alignment feature that holds [the] fiber optic face plate in position on a scanner platen. Ikafuji makes no mention of a scanner platen or of an alignment feature that holds [the] fiber optic face plate in position on a scanner platen. Because Ikafuji does not teach or suggest all of the elements of claim 6, the examiner's *prima facie* case fails. The examiner makes no argument why Ikafuji might be modified to include these elements of Applicant's claim 6.

iii. Claim 7

With particular regard to Applicant's claim 7, claim 7 depends from claim 1 and further recites in part that the fiber optic face plate is of a size to fit within the viewable area of a photographic slide. Ikafuji makes no mention of a photographic slide or of making a fiber optic face plate ... of a size to fit within the viewable area of a photographic slide. Because Ikafuji does not teach or suggest all of the elements of claim 7, the examiner's *prima facie* case fails. The examiner makes no argument why Ikafuji might be modified to include these elements of Applicant's claim 7.

iv. Claim 10

With particular regard to Applicant's claim 10, claim 10 depends from claim 1 and further recites in part a support structure for supporting an unmounted film original in relation to the fiber optic face plate. Ikafuji makes no mention of an unmounted film original or of a support structure for supporting an unmounted film original in relation to the fiber optic face plate. Because Ikafuji does not teach or suggest all of the elements of claim 10, the examiner's *prima facie* case fails. The examiner makes no argument why Ikafuji might be modified to include these elements of Applicant's claim 10.

D. Claim 22

The examiner makes no comment regarding Applicant's claim 22, other than to state that claim 22 is rejected. Applicant will assume that the grounds for rejecting claim 22 are similar to those for rejecting claim 1. Claim 22 is an independent means plus function claim reciting in part means for holding a transmissive original in substantial contact with an

entrance face of a fiber optic face plate. As has been argued above regarding claim 1, Ikafuji does not teach or disclose holding a transmissive original in substantial contact with an entrance face of a fiber optic face plate, and there is no motivation to modify the system of Ikafuji to include this claim element. The examiner's *prima facie* case fails in regard to Applicant's claim 22.

CONCLUSION

In view of the above, applicant respectfully requests that all of the examiner's claim rejections be reversed.

Respectfully submitted,

By David W. Boyd
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December 1, 2005
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CLAIMS APPENDIX

1. A scanner transparent media adapter, comprising a fiber optic face plate, the fiber optic face plate receiving light passing through a transmissive original that is in substantial contact with an entrance face of the fiber optic face plate, and wherein the fiber optic face plate transmits an image of the transmissive original from the entrance face to an exit face.
2. The scanner transparent media adapter of claim 1 wherein the transmitted image is spatially sampled by the fiber optic face plate.
3. The scanner transparent media adapter of claim 1, further comprising a light source.
4. The scanner transparent media adapter of claim 3, wherein the light source emanates substantially uniform diffuse light.
5. The scanner transparent media adapter of claim 3, further comprising an alignment feature that holds the light source in relation to the fiber optic face plate.
6. The scanner transparent media adapter of claim 1, further comprising an alignment feature that holds fiber optic face plate in position on a scanner platen.
7. The scanner transparent media adapter of claim 1, wherein the fiber optic face plate is of a size to fit within the viewable area of a photographic slide.
8. The scanner transparent media adapter of claim 1, further comprising a calibration area.
9. The scanner transparent media adapter of claim 8, further comprising a fiber optic face plate in the calibration area.
10. The scanner transparent media adapter of claim 1, further comprising a support structure for supporting an unmounted film original in relation to the fiber optic face plate.

11. A system, comprising:

a) a scanner, comprising

- i. an optical system;
- ii. a platen; and
- iii. a focal plane of the optical system substantially at a surface of the platen; and

b) a transparent media adapter, comprising

- i. a fiber optic face plate;
 - ii. an exit face of the fiber optic face plate, the exit face positioned substantially at the focal plane of the optical system of the scanner;
 - iii. an entrance face of the fiber optic face plate, substantially opposite the exit face; and
- wherein the entrance face receives light passing through a transmissive original, and the fiber optic face plate transmits an image of the transmissive original from the entrance face to the exit face.

12. The system of claim 11 wherein the optical system includes a contact image sensor module.

13. The system of claim 11, further comprising a light source.

14. The system of claim 13 wherein the light source is in the scanner transparent media adapter.

15. The system of claim 13 wherein the light source emanates substantially uniform diffuse light.

16. A method of scanning a transmissive original, comprising the steps of:

- placing the transmissive original in substantial contact with an entrance face of a fiber optic face plate;
- placing an exit face of the fiber optic face plate substantially at the focal plane of a scanner;

directing light through the transmissive original and into the entrance face of the fiber optic face plate; and
scanning an image of the transmissive original, which image emerges from the exit face of the fiber optic face plate.

17. The method of claim 16 wherein placing the exit face of the fiber optic face plate substantially at the focal plane of the scanner comprises placing the exit face of the fiber optic face plate on a platen of the scanner.
18. The method of claim 16, further comprising:
scanning a source of the light;
computing calibration factors to be applied to pixels in the scanned image of the transmissive original; and
correcting for photo response nonuniformity by applying the calibration factors to pixels in the scanned image of the transmissive original.
19. The method of claim 16 wherein the transmissive original is a mounted photographic slide.
20. The method of claim 16 wherein the transmissive original is an unmounted film original.
21. The method of claim 16 wherein the transmissive original is a photographic negative.
22. A scanner transparent media adapter, comprising:
a) means for holding a transmissive original in substantial contact with an entrance face of a fiber optic face plate; and
b) means for directing light through the transmissive original and into the fiber optic face plate.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.

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ATTORNEY DOCKET NO. 200209554-1

**IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE**

Inventor(s): **David W. Boyd**

Confirmation No.: 8894

Application No.: 10/397812

Examiner: Ullah, Akm E

Filing Date: Mar 25, 2003

Group Art Unit: 2874

Title: **Scanner Transparent Media Adapter Using Fiber Optic Face Plate**

Mail Stop Appeal Brief-Patents
Commissioner For Patents
PO Box 1460
Alexandria, VA 22313-1460

TRANSMITTAL OF APPEAL BRIEF

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on herewith.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) \$500.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

☐ (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below.

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\$120

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\$1020

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☐ The extension fee has already been filed in this application.

☒ (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

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Date of facsimile: December 1, 2005

Typed Name: Donna M Kraft

Signature: Donna M. Kraft

Respectfully submitted,

David W. Boyd

By David W. Boyd

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Rev 10/05 (April/Brief)

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PATENT APPLICATION

ATTORNEY DOCKET NO. 200209554-1

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): David W. Boyd

Confirmation No.: 8694

Application No.: 10/397812

Examiner: Ullah, Akm E

Filing Date: Mar 25, 2003

Group Art Unit: 2874

Title: Scanner Transparent Media Adapter Using Fiber Optic Face Plate

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Date of facsimile: December 1, 2005

Typed Name: Donna M Kraft

Signature: Donna M Kraft

Respectfully submitted,

David W. Boyd

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